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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,055

07/08/2003

Toshiyuki Okumura

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EXAMINER

LI, SHI K

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

08/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/614,055

Applicant(s)

OKUMURA ET AL.

Examiner

Shi K. Li

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 16-18 is withdrawn in view of the newly discovered reference(s) to Ishizuka et al. (U.S. Patent 7,233,741 B2). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 18 recites the limitation "ranking circuit" in line 2 of the claim. Instant specification, as originally filed, does not teach a ranking circuit in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka et al. (U.S. Patent 7,233,741 B2) in view of Dickson (U.S. Patent 6,711,340 B2).

Ishizuka et al. teaches in FIG. 1 an optical exchange comprising a plurality of input optical ports 25, a plurality of output ports 26, an optical switch 2, a switching module controller 5 equivalent to subsystem controller), memory 7, monitor 4 and a feedback control circuit including said memory, driving circuit 6 and controller 5. Ishizuka et al. teaches in col. 8, lines 6 that the switch is MEMS. Ishizuka et al. teaches in col. 12, lines 63-67 that a threshold is stored in memory 7 and channel power levels are compared with the threshold. The difference between Ishizuka et al. and the claimed invention is that Ishizuka et al. does not teach signal adder. However, Ishizuka et al. teaches in col. 9, lines 39-47 that the control circuit 5 comprises switching controller 51, power-level controller 52 and initial controller 53. The effects of all these sub-controllers must be combined together to form an overall control signal. Signal adders are commonly used for forming such an overall control signal from individual components. For example, Dickson teaches in FIG. 4 summer 104 and in FIG. 5 summers 207, 211 and 217 for combining signals generated by various circuits to form an overall control signal for actuating mirror. One of ordinary skill in the art would have been motivated to combine the teaching of Dickson with the optical exchange of Ishizuka et al. because a summer combines signals generated by various circuits to form an overall control signal for actuating switching elements. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include summer, as taught by Dickson, for combining signals generated by the various sub-controllers in the optical exchange of Ishizuka et al.

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6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka et al. and Dickson as applied to claims 16 and 18 above, and further in view of Fukashiro et al. (U.S. Patent 6,985,649 B2).

Ishizuka et al. and Dickson have been discussed above in regard to claims 16 and 18. The difference between Ishizuka et al. and Dickson and the claimed invention is that Ishizuka et al. and Dickson do not teach a host system. Since Ishizuka et al. includes in FIG. 1 switching control signal, it implies that there is a controller for generating the signal. To strengthen the rejection, the Examiner cites Fukashiro et al. for teaching a subsystem controller. Fukashiro et al. teaches in FIG. 2 operation control (equivalent to host system of instant claim) for generating switching command. One of ordinary skill in the art would have been motivated to combine the teaching of Fukashiro et al. with the modified optical exchange of Ishizuka et al. and Dickson because an operation control is need for determining which output port is the destination of switching with respect to particular input port while the controller 5 only controls the movement of MEMS and equalizes the power output. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an operation control, as taught by Fukashiro et al., in the modified optical exchange of Ishizuka et al. and Dickson because an operation control is need for generating a switching control signal designating an output port as the destination of switching with respect to particular input port while the controller 5 only controls the movement of MEMS and equalizes the power output.

Response to Arguments

7. Applicant's arguments with respect to claims 16-18 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl
15 August 2008



Shi K. Li
Primary Patent Examiner